

ABSTRACT OF THE DISCLOSURE

A digital wireless communication apparatus includes a first modulator that modulates a pilot symbol according to a first modulation scheme, and a second modulator that modulates specific symbols according to a second modulation scheme, the second modulation scheme being different than the first modulation scheme. A third modulator modulates symbols other than the pilot symbol and the specific symbols according to a third modulation scheme, the third modulation scheme being different than the first and second modulation schemes. A timing controller controls timing such that the specific symbols are inserted immediately before and after the pilot symbol. The signal points of the specific symbols are allocated on an imaginary line that connects the origin point and a signal point of the pilot symbol on a signal space diagram.